U.S. Department
of Transportation
**Research and
Special Programs
Administration**

400 Seventh St., S.W.
Washington, D.C. 20590

**IAEA CERTIFICATE OF COMPETENT AUTHORITY
SPECIAL FORM RADIOACTIVE MATERIALS
CERTIFICATE NUMBER USA/0185/S, REVISION 5**

This certifies that the source described has been demonstrated to meet the regulatory requirements for special form radioactive material as prescribed in the regulations of the International Atomic Energy Agency[1] and the United States of America[2] for the transport of radioactive materials.

1. Source Identification - New England Nuclear Model No. NER-476C.

2. Source Description - Source is a single encapsulation of Type CRES 316L stainless steel, tungsten-inert-gas welded, in the form of a circular annulus of outer diameter 51 mm (2.0 in), inner diameter 24 mm (0.95 in), and height 8 mm (0.31 in). Source material is embedded in a vitreous ceramic fused to an annular groove in an annular tungsten insert. Gamma window has a thickness of 0.25 mm (0.01 in). Capsule weight is 220 g (0.48 lb). Construction shall be in accordance with New England Nuclear Corporation Drawing No. 313-390 (attached).

3. Radioactive Contents - Not more than 0.074 TBq (2.0 Ci) of Americium-241 in ceramic fused to the tungsten insert.

4. Quality Assurance - Records of Quality Assurance activities required by Paragraph 310 of the IAEA regulations[1] shall be maintained and made available to the authorized officials for at least three years after the last shipment authorized by this certificate. Consignors and consignees in the United States exporting or importing shipments under this certificate shall satisfy the requirements of Subpart H of 10 CFR 71.

5. Expiration Date - This certificate expires November 30, 2007.

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1 "Regulations for the Safe Transport of Radioactive Material, 1996 Edition (Revised), No. TS-R-1 (ST-1, Revised)," published by the International Atomic Energy Agency (IAEA), Vienna, Austria.

2 Title 49, Code of Federal Regulations, Parts 100 - 199, United States of America.

CERTIFICATE USA/0185/S, REVISION 5

This certificate is issued in accordance with paragraph 804 of the IAEA Regulations and Section 173.476 of Title 49 of the Code of Federal Regulations, in response to the petition and information dated June 21, 2002 submitted by Isotope Products Laboratories, Valencia, CA, and in consideration of other information on file in this Office.

Certified by:

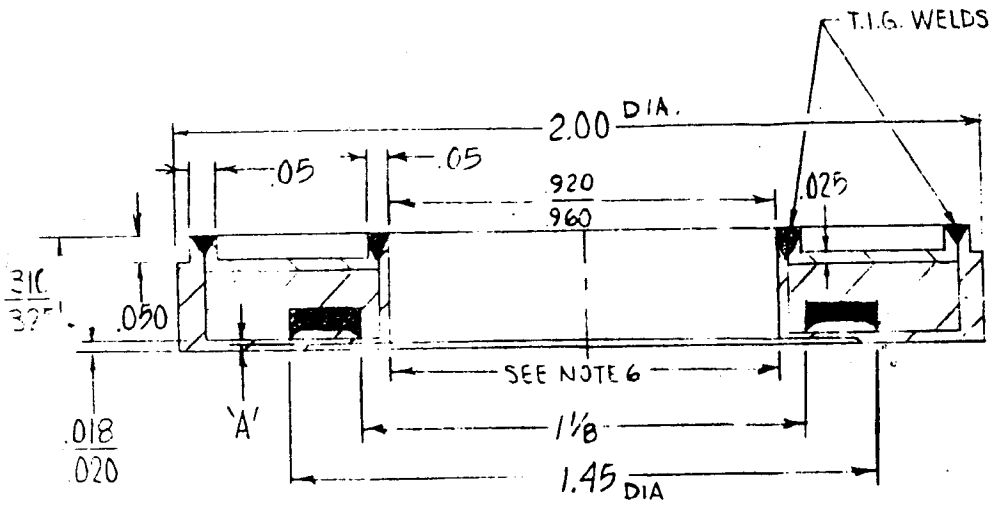
NOV 22 2002

Robert A. McGuire
Associate Administrator for
Hazardous Materials Safety

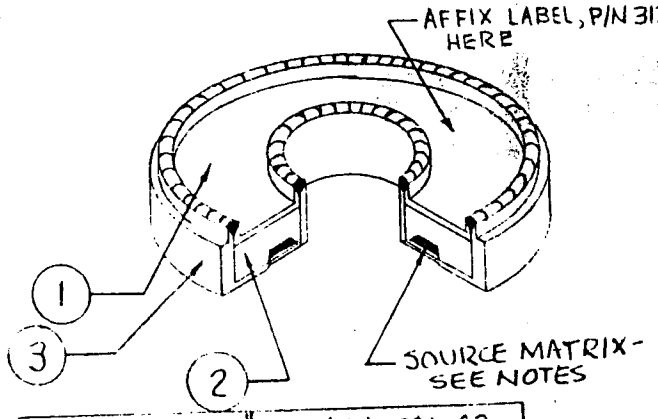
(DATE)

Revision 5 - Issued to reference the 1996 IAEA regulations, and to extend the expiration date.

DATE	SYM	REVISION RECORD	AUTH



SECTION VIEW



ASS'Y P/N-01		ASS'Y P/N-02	
ITEM NO.	PART NO.	ITEM NO.	PART NO.
1	313-28-01	1	313-268-01
2	313-28-02	2	313-268-02
3	313-28-03	3	313-268-03

NOTES

1.

ASS'Y P/N	MODEL NUMBER	CAPSULE NUMBER	CAPSULE MAT'L	WINDOW THICKNESS(A')	ANSI N542-1977 CLASSIFICATION
-01	NER-476C	LEA66	1100 AL ALM.	6 MIL	77C43322
-02	NER-476C	LEA316	316L STN. STL.	10 MIL	77C644

2. SOURCE MATRIX CONSISTS OF AM-241 INCORPORATED INTO A VITREOUS CERAMIC & FUSED TO THE TUNGSTEN ALLOY SHIELD (ITEM NO. 2).

3. NOMINAL ACTIVITY TO BE SPECIFIED ON PURCHASE ORDER. TOLERANCE TO BE +15%, -10%. MAXIMUM ACTIVITY CONTENT TO BE 2000 MCi.

4. LEAK TEST PER ANSI N542-1977 PROCEDURES A2.2.1 AND A2.1.1 OR A2.1.3. LIMIT < 1×10^{-8} uCi.

5. ASS'Y P/N-02 IS 'SPECIAL FORM' MATERIAL PER 10CFR PART 71.-1.

6. SELECT A RING SHIELD, P/N 313-32C-07, HAVING AN O.D. THAT SLIP F.T. INTO CAPSULE I.D. WHEN ASSEMBLING AN XRF SYSTEM.

TOLERANCES (EXCEPT AS NOTED)	NEW ENGLAND NUCLEAR CORP.		
DECIMAL XX ± .010 ± XXX ± .005		SCALE N.T.S.	DRAWN BY J. SULLIVAN / APPROVED BY
FRACTIONAL ± 1/32	TITLE NER-476C 241AM ANNULAR SOURCE		
ANGULAR ± 30'	DATE 2-15-80	DRAWING NUMBER 313-390	